Health & Social Care in the Community

WILEY

RESEARCH ARTICLE OPEN ACCESS

Views, Experiences and Perceived Effectiveness of Rebound Exercise by Adults With Neurological Disorders: A Qualitative Study

Adaora Justina Okemuo[1] | Yetunde Marion Dairo[2] | Dearbhla Gallagher[3]

[1]Physiotherapy Department, School of Health, Sport and Nutrition, University College Birmingham, Birmingham, UK | [2]School of Health and Rehabilitation Sciences, Health Sciences University, Bournemouth, UK | [3]Sports, Exercise and Health Department, School of Health and Life Sciences, University of the West of Scotland, Paisley, Scotland, UK

Correspondence: Adaora Justina Okemuo (aokemuo@ucb.ac.uk) | Yetunde Marion Dairo (yetunde.dairo@hsu.ac.uk)

Received: 13 March 2025 | **Revised:** 16 May 2026 | **Accepted:** 24 June 2026

Academic Editor: Anuja Salgaonkar

Keywords: community-dwelling | experience | neurological disorders | rebound exercise | views

ABSTRACT

Background: Rebound exercise (RE) is increasingly explored as a potential intervention for adults with neurological disorders, yet little is known about the participants' subjective experiences. The community setting is particularly important for understanding the real-world applicability and acceptability of such interventions. This qualitative study aimed to explore the perspectives of adults with neurological disorders who participated in a 12-week community-based RE program.

Methods: A semistructured interview was used to gather in-depth insights from 15 participants (67% female, 50% aged 60 and older) who completed the program. Interviews were transcribed verbatim and analysed using thematic analysis to identify key themes related to participants' experiences, perceived benefits, barriers and suggestions for improving the intervention.

Results: Four major themes emerged: (1) Enjoyment and Motivation: Participants found RE engaging and enjoyable, enhancing their motivation to remain physically active. (2) Physical and Functional Improvements: Many reported noticeable improvements in balance, coordination, mobility and overall physical function, which translated into greater confidence in performing daily tasks. (3) Social Support: Participants valued the motivational role of others and support from facilitators, leading to greater adherence. (4) Barriers and Recommendations: Participants identified time constraints and the preference for group-based sessions as areas for improvement, suggesting that future programs offer more structured group exercise options to enhance social interaction.

Conclusion: This study highlights the subjective benefits of RE for individuals with neurological disorders in a community setting, with participants perceiving significant improvements in their physical function and psychological well-being. The findings underscore the importance of incorporating enjoyable, socially supportive elements into exercise programs to enhance adherence and long-term engagement. Future research should explore these insights, particularly the preference for group sessions, to optimise the design and delivery of RE interventions in community-based rehabilitation programs.

1 | Introduction

Neurological disorders represent a significant health challenge, contributing greatly to mortality and morbidity rates in the United Kingdom and globally [1, 2]. These conditions often lead to impairments in physical function, mobility and quality of life, necessitating effective rehabilitation strategies [3]. Traditional rehabilitation approaches, while beneficial, can sometimes be limited in their ability to engage patients long term or address the complex, multifaceted needs of those with neurological disorders. Sustaining long-term adherence to exercise programs remains a key challenge, especially among community-dwelling individuals with neurological conditions, due to barriers such as lack of motivation, perceived difficulty, time constraints and limited accessibility to engaging exercise modalities [4, 5].

Rebound exercise (RE), a form of therapy performed on minitrampolines, has emerged as a promising intervention for various disabilities, including neurological disorders. This low-impact form of exercise offers unique biomechanical properties, including lower peak ground reaction force compared to exercises performed on solid ground [6–8]. This makes it suitable for individuals with various physical limitations. Previous research has demonstrated the benefits of RE for adults with chronic conditions, including improvement in functional mobility [9], body mass index [10, 11], balance [12, 13], muscle strength [14] and quality of life [15].

However, despite the growing interest in RE, there is limited research on its application and effectiveness, specifically for individuals with neurological disorders in community settings. Moreover, while a recent quantitative study has shown promising results regarding physical outcomes [16], there is a notable lack of qualitative research exploring participants' subjective experiences, perceptions and preferences regarding this form of exercise. Understanding the views and experiences of individuals participating in community-based RE programs is necessary for several reasons. First, it can provide insights into the acceptability and feasibility of implementing such interventions in real-world settings. Second, exploring participants' perceived benefits and challenges can help refine and optimise the design of future programs. Lastly, understanding the factors that motivate adherence and engagement can contribute to developing more effective, patient-centred rehabilitation strategies.

This study, therefore, aims to address these knowledge gaps by exploring the perspectives of adults with neurological disorders who participated in a 12-week community-based RE program. By giving voice to the participants, this study seeks valuable insights to inform the design and implementation of more effective, engaging and sustainable RE interventions in community settings.

2 | Methods

This qualitative study was embedded within a larger 12-week community-based RE trial (registered at open science framework, registration number 3g9dr; quantitative outcomes reported previously [16]). The qualitative component aimed to explore participants' subjective experiences, perceptions and preferences regarding RE. The study was conducted and reported according to the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines to increase transparency and methodological rigour [17]. Ethical approval was obtained from the Buckinghamshire New University Research Ethics Committee (UEP2022Sep01). This study adopted a qualitative design, which is appropriate for exploring participants' experiences of the intervention and its perceived feasibility. The study did not involve patient or public contributors in its design, conduct or dissemination and this is acknowledged as a limitation in the discussion.

2.1 | Context of the RE Intervention

Briefly, participants attended weekly RE sessions at university campuses, using minitrampolines (Fit Bounce Pro) with safety handlebars. Sessions followed a standardised protocol [16], including warmup, main exercises guided by YouTube tutorials (instructor Paul Eugene) and cooldown (Figures 1 and 2), all supervised by a physiotherapist (Adaora Justina Okemuo). Further intervention details are provided in the Template for Intervention Description and Replication (TIDieR) checklist (Supporting File 1).

2.2 | Study Design and Participants

This qualitative study was conducted through semistructured interviews to explore the views and experiences of participants who had taken part in a 12-week RE trial. The participants were recruited using a purposive sampling technique [18]. The eligibility criteria included (i) adults with neurological disorders living in the community who scored three or less on the Modified Rankin Scale, (ii) participants must have completed the 12-week RE trial, and (iii) participants must have given verbal and written consent. Purposive sampling was employed to ensure diversity across key characteristics: neurological diagnosis (Parkinson's disease, stroke, traumatic brain injury, Huntington's disease and multiple sclerosis), age, sex, time since diagnosis and attendance frequency. Recruitment continued until the sampling framework achieved representation across these categories. No participants withdrew from the interview study after consenting.

2.3 | Data Collection Procedures

Semistructured interviews were conducted in person at the university campuses following the 12-week intervention. Participants chose their interview location (private room on campus) and could have a companion present if desired. Interviews lasting 45–60 min were audio-recorded (with backup). The semi-structured interview guide (Supporting File 2) was adapted from previous studies [19–21] and pilot-tested for clarity. One researcher (AO), a female physiotherapist and doctoral candidate who had supervised participants during the trial, conducted all interviews to ensure consistency. To minimise social desirability bias given this dual role, AO emphasised confidentiality, encouraged honest responses without judgement and maintained a neutral stance throughout. Reflexivity played a crucial role in addressing potential researcher bias. The researcher consistently engaged in self-reflection, acknowledging personal biases and assumptions that could impact the study. This ongoing process of reflexivity was integral to maintaining the integrity of the research and ensuring the authentic representation of participants' experiences. Peer-debriefing sessions were conducted to gain alternative perspectives and challenge assumptions.

FIGURE 1 | A participant on the minitrampolines during the rebound exercise study.

The sample size ($n = 15$) was guided by recommendations for qualitative descriptive studies, where 9–17 interviews typically achieve data adequacy [22, 23]. Data saturation, defined as the point where no new codes or themes emerged from three consecutive interviews, was assessed iteratively throughout analysis. Saturation was confirmed through team discussion (AO, YD and DG) after the 14th interview, with the 15th interview confirming no novel findings.

2.4 | Data Analysis

Audio-recordings were transcribed verbatim. A subset of participants ($n = 5$) reviewed their transcripts for accuracy (member checking); all confirmed faithful representation. Transcripts were anonymised and imported into NVivo. Reflexive thematic analysis following Braun and Clarke's six-phase approach [24] was conducted. Two researchers (AO and YD) independently coded three initial transcripts, comparing and refining codes until consensus. Remaining transcripts were coded by AO, with regular peer-debriefing sessions (three meetings involving AO, YD and DG) to review emerging themes, challenge interpretations and resolve discrepancies. Themes were iteratively refined through team discussion. The final thematic structure was reviewed against the full dataset to ensure adequate representation of participant perspectives.

FIGURE 2 | Another participant engaging in rebound exercise.

3 | Results

Fifteen participants with a mean age of 62.07 ± 8.705 participated in the semi-structured interview study. Most of the participants were females (66.7%), retired (60%) and had been diagnosed in the past 5 years or less (53.3%). Of the participants, eight had Parkinson's disease (53.3%), three were stroke survivors (20%), two had a traumatic brain injury (13.3%) and the remaining two had Huntington's disease (6.7%) and multiple sclerosis (6.7%). Participants were predominantly White British ($n = 12$, 80%), with three participants identifying as other ethnic backgrounds. Educational attainment varied: $n = 5$ (33%) held university degrees, $n = 4$ (27%) had vocational qualifications and $n = 6$ (40%) had secondary education only. A total of 54 codes were generated from the data, resulting in four main themes and eight subthemes: (i) Enjoyment and Motivation, (ii) Physical and Functional Improvement, (iii) Social Support and (iv) Barriers and Recommendations. Table 1 presents the identified themes, subthemes and examples of corresponding quotes.

3.1 | Theme 1: Enjoyment and Motivation

3.1.1 | Subtheme 1.1: Sense of Fun and Emotional Well-Being

Participants frequently expressed enjoyment as a primary factor driving their engagement with RE. Many described the sessions as "fun," "engaging" and "different from conventional exercises," which contributed to their adherence and positive perception of the program. Several participants highlighted that the rhythmic nature of bouncing and the novelty of the exercise kept them motivated, with one stating, "*It makes you smile. It gives you, I think it's called endorphins or something, that delicious 'feel good'. It's just because it's childish, I mean, not many grown-ups do childish things. ..... because it's fun, and it seems to give a bigger workout than you get doing other things because of the fact that you're bouncing up and down. I gave it a go because it's different and I'm glad I did.*" (LM, female, 66 years).

3.1.2 | Subtheme 1.2: Altruistic Versus Self-Oriented Motivation

The motivation to participate was shaped by both altruistic and self-oriented factors. Altruistic motivations were particularly notable, with some participants wanting to contribute to research and help others with similar neurological conditions. For example, one participant noted, "*I enjoy taking part in any sort of research, I mean, even if it's not going to actually benefit me greatly, you know, it might help people in the future.*" (JK, female, 58 years). In contrast, self-oriented motivations were more prevalent, as participants sought to gain specific health benefits, such as improved mobility, balance or strength. One participant remarked, "*I joined to see how much improvement in my strength and balance I can get. And also because I think any exercise is better than none..... So, this is helpful.*" (ML, male, 63 years). The relationship between enjoyment and motivation was clear, as the fun aspects of the exercise often bolstered participants' dedication to the program. Their altruistic or self-oriented motivations offered a compelling reason for their continued participation.

TABLE 1 | Summary of main themes, subthemes and examples of quotes.

Main themes	Sub-themes	Direct quotes
1. Enjoyment and Motivation	Sense of fun and emotional well-being	"I found it really enjoyable. I've never done rebound exercise before. So I didn't know what to expect when I came but I had so much fun doing it." (SD, female, 62 years).
		"I've loved it. I've really enjoyed it. Um, I've really enjoyed the whole routine of it coming in on a Tuesday and a Thursday....It's been fun." (SB, female, 67 years).
		"I feel happy and energised. The good thing about rebound exercise is the fact that it is enjoyable, so you always look forward to rebounding." (MB, female, 58 years).
		"I've never done anything that exciting before. I feel very happy" (DS, female, 68).
		"It makes you smile. It gives you, I think it's called endorphins or something, that delicious 'feel good'. It's just because it's childish, I mean, not many grown-ups do childish things. So, it's nice to be able to. It makes me feel better and it makes me feel good about having done it which is what you need in Parkinson's. Using the rebounder is a really good thing to add to things I think I already do because it's fun, and it seems to give a bigger workout than you get doing other things because of the fact that you're bouncing up and down. I gave it a go because it's different and I'm glad I did." (LM, female, 66 years).
		"It's been a long time since I did exercise and this is quite different from what I'm used to. It's fun." (RB, female, 63 years).
	Altruistic versus self-oriented motivation	"Even if it doesn't make a difference to me, if it can help somebody else in the future, I'm happy to do it." (BC, male, 70 years).
		"I enjoy taking part in any sort of research, I mean, even if it's not going to actually benefit me greatly, you know, it might help people in the future." (JK, female, 58 years).
		"Um, well, I'm enjoying it and now, when I start something, I like to finish it. And the benefits I observed after a few sessions, especially my sleep improvement, made me come for more" (VO, male, 38 years).
		"I joined to see how much improvement in my strength and balance I can get. And also, because I think any exercise is better than none and at this point in time because we're moving house, I've not been doing any other regular exercise. So, this is helpful." (ML, male, 63 years).
		"To improve my balance and strength. And because I liked it." (MB, female, 58 years).

(Continues)

TABLE 1 | (Continued)

Main themes	Sub-themes	Direct quotes
2. Physical and functional improvement	Health benefits	"Usually in the afternoon, I get dystonia, which is involuntary movement in the shoulder. But I found that on the afternoons after I have rebounded, I don't tend to get that so that's basically great. So I think without rebounding, I'll probably be slightly more sluggish. In an intangible way, it just helps your balance and coordination." (DS, female, 68 years).
		"I think it actually helps your coordination because it's very difficult to move your legs and your arms at the same time if you have Parkinson's. And that is something I did find I was doing towards the end. ... Rebounding sort of gives me more. Gets me to move my arms as well. And my legs. Coordination seems better." (KT, male, 66 years).
		"And I did find that after a few sessions, my legs were feeling stronger which is quite good. I found that the bouncing did increase my balance. But, I can see a number of benefits because it's not only good for strengthening, but also for coordination and balance." (ML, male, 63 years).
		"This form of exercise, even if you're not jumping up and down too much really gets the blood circulating through the body and hopefully everywhere and it makes your brain think that you're using the side which is weak. It's like a complete thing, the rebound, do you see what I mean? It has both sides of your body doing it. It's helped with my walking." (PS, female, 72 years).
		"It's helped with the hip pain. I feel it has strengthened my legs because they feel stronger now and I walk better and faster than before. Rebound exercise has built my confidence in walking again because previously I used to be scared about going out for fear of pain from walking and I would always get a taxi so I wouldn't walk too much. But now I can confidently work without pain." (PY, female, 69 years).
	Surpassing perceived limitations	"It helps you do things you don't think you can do, which is good. I feel less like a person with Parkinson's because it seems to give you wings. It makes you let go of your inhibitions" (LM, female, 66 years).
		"....it's made me feel in control. Um, I think before I started this trial, all I had really was PD power and Tai Chi whereas this is like something else I've got to help me hold back the disease, you know. So um, Yeah, it's made me feel more positive. I've got this. I can do this." (SB, female, 67 years).
		"...And, it also works sort of mentally to make you feel more capable and confident." (ML, male, 63 years).
		"Definitely. I feel it's really good for me because normally, before I started the trial, I couldn't march on the spot on the hard ground, but I could do it on the trampoline. And once I get home, I find that I can actually do it, and I've actually been able to jump for the first time since my stroke over 50 years ago." (PS, female, 72 years).

(Continues)

TABLE 1 | (Continued)

Main themes	Sub-themes	Direct quotes
3. Social support	Group dynamics	"...doing it in groups. If we could compare what we're doing and the goals against each other in the group, it could motivate and encourage people." (PN, male, 50 years).
		"Again, having it in small groups with others....like a group class would be nice. And you can help and support each other." (RB, female, 63 years).
		"Group sessions would be fun. Especially if you're there because then you'll be exercising with other people with neurological conditions. When I do my PD power class at a Neuro Centre... I didn't know anybody else who had Parkinson's before then, so that's been quite good as you can see other people who have the same condition as you." (SB, female, 67 years).
		"I think if you could have group sessions just like we do at the MS centre, it would be great. Seeing others in the same state as you gives you some encouragement and motivation." (SD, female, 62 years).
	Support from facilitators	"I feel very happy. I think that's partly because of the tutor; I call him the 'happy man'..., I've also enjoyed working with you, [researcher]. You made it fun, and it's also particularly nice that you've been doing it with me. It's been good and fun." (DS, female, 68 years).
		"I enjoy watching the instructor on the video. He cheers you up, doesn't he? Makes you laugh a bit, which is very important." (PS, female, 72 years).
		"Oh, I like the man [the rebound instructor]. And you....You guys are encouraging because Huntington's can be depressing. The tutor, with his cheerful personality, makes me laugh. It was quite good when he had that other older lady with him in the video. That was quite encouraging to see someone like me doing it. Yeah, I think I quite like that. I mean, she was doing it quite badly, you know, the modified version (laughs.)." (PY, female, 69 years).
		"I enjoy the tutor because he's a happy man. He makes it fun and he's good because he does the countdown ...four, three, two, one, so you know when to switch. He's very good. He can fit me in his pocket or suitcase, but he needs to take me on his cruise... (laughs)." (SB, female, 67 years).
4. Barriers and Recommendations	Practical challenges	"Time constraints among the different things I do really is a challenge." (PN, male, 50 years).
		"Lack of access to the rebound class is a major challenge. There is no rehab centre in town where you can do rebound exercise, is there?" (RB, female, 63 years).
		"I see space as a barrier. The size of the trampoline was a little bit small. I think, had it been a little bit bigger, that might have been a bit more beneficial in allowing more space for movements. Also, the bar. It's a hindrance. But I know it has to be there because some people use it. But I found that hindered my arm movements at times." (JK, female, 58 years).
		"Um, and the safety rail kind of it, I look at it two ways because it's good to have it there clearly because you don't fall off, but it can get in the way a little bit with some of the exercises." (LM, female, 66 years).

(Continues)

TABLE 1 | (Continued)

Main themes	Sub-themes	Direct quotes
	Suggestions for improvements	"For the future, I would like to have music with the exercise just like this one. I would also like to do it with other people. Um, And I would like something bigger, you know, so that I have space to explore." (VO, male, 38 years). "I think getting a rebounder with a larger surface that gives you more space to play around would be my recommendation." (MB, female, 58 years). "I think the rebound mat should be a little bit bigger to give you a bit more scope to move around." (JK, female, 58 years). "I think future sessions should be done as a group. I think a group rebound session would be quite good." (DS, female, 68 years). "Doing something on your own is so much harder and challenging. So, I would recommend a group session. It makes it more interesting for you and motivates you to do it." (KT, male, 66 years). "I think the availability of being able to do this kind of thing in the gyms that people with Parkinson's can join for free would be excellent. Possibly group classes because that will give you the group sort of engagement, which is always good, you know." (LM, female, 66 years).

3.2 | Theme 2: Physical and Functional Improvements

3.2.1 | Subtheme 2.1: Health Benefits

Many participants reported noticeable health benefits throughout the program, including increased mobility, improved balance and enhanced strength. One participant remarked, *"And I did find that after a few sessions, my legs were feeling stronger which is quite good. I found that the bouncing did increase my balance. But, I can see a number of benefits because it's not only good for strengthening but also for coordination and balance."* (ML, male, 63 years). Others noted improved sleep and reduced pain, positively impacting their daily activities. Additionally, participants commented on feeling more energised and experiencing fewer physical symptoms associated with their conditions, with one stating, "*Usually in the afternoon, I get dystonia, which is involuntary movement in the shoulder. But I found that on the afternoons after I have rebounded, I don't tend to get that so that's basically great*. ...." (DS, female, 68 years). Another revealed, "*It's helped with the hip pain. I feel it has strengthened my legs because they feel stronger now and I walk better and faster than before. Rebound exercise has built my confidence in walking again because previously, I used to be scared about going out for fear of pain from walking, and I would always get a taxi so I wouldn't walk too much. But now I can confidently work without pain*." (PY, female, 69 years).

3.2.2 | Subtheme 2.2: Surpassing Perceived Limitations

Participants consistently described how RE enabled them to overcome perceived physical and mental barriers, fostering a renewed sense of capability and empowerment. One participant shared, "*It helps you do things you don't think you can do, which is good. I feel less like a person with Parkinson's because it seems to give you wings. It makes you let go of your inhibitions*" (LM, female, 66 years). For some, RE offered a sense of control and hope in managing their condition. As one participant explained, "*Before I started this trial, all I had really was PD Power and Tai Chi, whereas this is like something else I've got to help me hold back the disease. It's made me feel more positive. I've got this. I can do this*." (SB, female, 67 years). Others emphasised the mental benefits of RE in building confidence and self-assurance. One participant noted, "*…it works sort of mentally to make you feel more capable and confident*." (ML, male, 63 years). The sense of achievement was particularly profound for those who overcame long-standing physical limitations. One participant reflected, "*Before I started the trial, I couldn't march on the spot on hard ground, but I could do it on the trampoline. And once I get home, I find that I can actually do it. I've even been able to jump for the first time since my stroke over 50 years ago*." (PS, female, 72 years). These experiences highlight RE's transformative potential in fostering physical progress and psychological resilience.

3.3 | Theme 3: Social Support

3.3.1 | Subtheme 3.1: Group Dynamics

Participants frequently expressed the value of exercising in groups, emphasising the motivation, camaraderie and encouragement that group sessions offer. One participant shared, "… *doing it in groups. If we could compare what we're doing and the*

goals against each other in the group, it could motivate and encourage people." (PN, male, 50 years). Others noted the importance of shared experiences, particularly among individuals with similar neurological conditions, which fosters a sense of community. For example, one participant explained, "*When I do my PD Power class at a Neuro Centre... I didn't know anybody else who had Parkinson's before then, so that's been quite good as you can see other people who have the same condition as you*." (SB, female, 67 years). Another participant valued having the opportunity to do the sessions with a friend and revealed, "*I really appreciate being allowed to come with my friend. We keep an eye on each other during the sessions, and it's been such great support. It's motivating to have someone there with you, cheering you on, and it makes the whole experience even better.*" (PY, female, 69 years). The social interactions and mutual support were seen as integral to sustaining engagement and promoting adherence.

3.3.2 | Subtheme 3.2: Support From Facilitators

The role of instructors and facilitators emerged as another vital aspect of social support. Many participants appreciated the enthusiasm, encouragement and relatability of the facilitators. One participant reflected, "*I feel very happy. I think that's partly because of the tutor; I call him the 'happy man'... You [researcher] made it fun, and it's particularly nice that you've been doing it with me*." (DS, female, 68 years). Another participant noted, *"I enjoy watching the instructor on the video. He cheers you up, doesn't he? Makes you laugh a bit, which is very important."* (PS, female, 72 years). The use of relatable examples, such as demonstrating modified versions of exercises, was also appreciated, as one participant observed, "*...The tutor, with his cheerful personality, makes me laugh. It was quite good when he had that other older lady with him in the video. It was quite encouraging to see someone like me doing it*." (PY, female, 69 years).

3.4 | Theme 4: Barriers and Recommendations

3.4.1 | Subtheme 4.1: Practical Challenges

Participants identified several barriers to participating in RE and provided constructive recommendations for improving its accessibility and implementation. These insights are summarised under the subthemes of practical challenges and suggestions for improvement. Time constraints were a prominent barrier, with participants highlighting difficulties in balancing exercise with other responsibilities. This made once-a-week frequency the most popular attendance frequency preference. One participant explained, "*Time constraints among the different things I do really is a challenge*." (PN, male, 50 years). Accessibility was also a major concern, particularly the lack of local facilities offering RE. As one participant noted, "*Lack of access to the rebound class is a major challenge. There is no rehab centre in town where you can do rebound exercise, is there?*" (RB, female, 63 years). Equipment-related issues were another recurring theme. Some participants found the size of the trampoline limiting, as one remarked, "*The size of the trampoline was a little bit small. I think, had it been a little bit bigger, that might have been a bit more beneficial in allowing more space for movements*." (JK, female, 58 years). Similarly, the safety bar, though essential for stability, was seen as restrictive. One participant shared, "*The safety rail... it's good to have it there clearly because you don't fall off, but it can get in the way a little bit with some of the exercises*." (LM, female, 66 years).

3.4.2 | Subtheme 4.2: Suggestions for Improvement

Participants offered various recommendations to enhance the RE experience. Many suggested larger rebounders to allow for greater freedom of movement. One participant stated, "*I think the rebound mat should be a little bit bigger to give you a bit more scope to move around*." (JK, female, 58 years). Group sessions were another popular recommendation, as participants believed they could provide motivation and engagement. One participant remarked, "*Doing something on your own is so much harder and challenging. So, I would recommend a group session. It makes it more interesting for you and motivates you to do it*." (KT, male, 66 years). Music was an integral part of the RE sessions, and participants expressed their appreciation for it, noting how it enhanced their overall enjoyment. Looking ahead, participants emphasised the importance of continuing to incorporate music in future sessions, as one participant stated, "*For the future, I would like to have music with the exercise... it makes it more enjoyable*." (VO, male, 38 years). Expanding the availability of RE in community gyms or rehabilitation centres was considered an important step toward making it more accessible. For example, one participant suggested, "*I think the availability of being able to do this kind of thing in the gyms that people with Parkinson's can join for free would be excellent*." (LM, female, 66 years).

4 | Discussion

This study provides novel qualitative insights into the experiences of adults with neurological disorders participating in RE. Unlike previous survey-based research [25], the in-depth interview approach offers detailed contextual understanding of participants' perspectives. By using in-depth interviews, this study provides a more detailed and contextualised understanding of participants' opinions and experiences, contributing to a deeper understanding of RE and its potential benefits and limitations.

The central role of enjoyment and motivation in promoting exercise adherence among neurological populations is well established [26–28]. However, this study reveals that RE may generate enjoyment through unique mechanisms: the "childish" quality of bouncing (described by one participant), the rhythmic proprioceptive feedback and the novelty compared to conventional rehabilitation exercises. These features align with self-determination theory, suggesting that RE satisfies needs for competence (mastering a novel skill) and autonomy (choosing intensity levels) beyond mere hedonic pleasure [29]. Importantly, participants' altruistic motivations such as desiring to help future patients complemented intrinsic motivations, a finding less commonly emphasised in exercise adherence literature [30–33]. This dual-motivation profile suggests that framing RE not only as personally beneficial but also as contributing to collective knowledge may enhance engagement. Future studies could explore how these motivational factors evolve over time and their impact on long-term adherence.

Participants reported improvements across multiple domains; mobility, balance, strength, sleep quality and confidence, reinforcing RE's therapeutic potential. The convergence between

these qualitative findings and our quantitative results [16] strengthens evidence for RE as a holistic intervention. However, caution is warranted when situating these findings within existing literature: much prior research has evaluated rebound therapy—a distinct intervention delivered by trained therapists specifically for children and adults with neurological disabilities—rather than RE as a fitness-oriented activity [15, 34]. The present study contributes evidence for the latter, less-studied approach. Notably, participants described surpassing perceived limitations (e.g., marching and jumping). This suggests that the trampoline's unique biomechanical properties, low impact, reduced ground reaction forces and prolonged contact time [7], may enable movement practice that transfers to hard surfaces, a phenomenon warranting further investigation.

Social support emerged as critical, consistent with broader rehabilitation literature [35–37]. Although sessions were primarily one-on-one, participants who attended with a friend appreciated the mutual encouragement. Interestingly, even those exercising alone strongly preferred group-based future implementations, suggesting that social elements (peer modelling, shared progress tracking and collective accountability) may enhance engagement beyond the practical benefits of group logistics. Additionally, music was highlighted as a valuable enhancement; participants felt that music increased enjoyment and engagement, consistent with studies demonstrating the motivational and psychological benefits of music in exercise settings [38, 39]. Facilitator support characterised by enthusiasm, tailored guidance and emotional encouragement, was equally crucial, aligning with evidence that empathetic instructors enhance rehabilitation engagement [26, 40]. These findings imply that future RE programmes for neurological populations should incorporate structured group elements and music where feasible, while also training facilitators to provide individualised, affirming support.

The barriers reported here differed significantly from the neurological exercise literature, where psychological obstacles such as lack of motivation, fear of falling and low confidence predominate [41–44]. Instead, participants primarily identified logistical challenges like class availability, time constraints and equipment design (rebounder size and restrictive safety rail). This divergence is clinically significant. It suggests that RE may bypass typical psychological barriers through its inherent appeal (enjoyment, perceived safety and immediate feedback). The absence of fear-of-falling reports is particularly notable given that falls are a major concern in this population [45]. Participants consistently framed the safety handlebar as reassuring, not fear-inducing—a reversal that challenges assumptions about trampoline safety in neurological rehabilitation. The practical implication is that once RE is made logistically accessible, adherence may be less constrained by motivational barriers than with conventional exercises. Future implementation efforts should, therefore, prioritise the following: (a) expanding community-based class availability, (b) offering flexible scheduling and (c) optimising rebounder dimensions for varied body sizes and movement needs.

Participants also recommended that RE be incorporated into routine exercise programmes within community neurorehabilitation centres to improve accessibility. Addressing this logistical recommendation, alongside the design improvements noted earlier (e.g., larger rebounder surfaces and flexible safety rails), could help translate the promising findings of this study into real-world community settings. Future research should explore the implementation of these tailored programmes across diverse rehabilitation environments.

4.1 | Strengths and Limitations

This study has several strengths. First, adherence to COREQ guidelines [17] enhances reporting transparency. Second, the sample included diverse neurological diagnoses (five conditions), improving transferability across neurological populations. Third, methodological rigour was supported by independent coding, peer debriefing and member checking. Fourth, triangulation with quantitative outcomes [16] strengthens the credibility of self-reported benefits. Despite these strengths, several limitations warrant consideration. First, self-selection bias may have favoured more motivated or physically capable individuals, potentially limiting transferability to less engaged populations [46]. Secondly, social desirability bias, a recognised risk in interviewer-administered qualitative research [47], was elevated here given the interviewer's dual role as session supervisor. Although efforts were made to encourage honest responses, this relationship may have influenced participant accounts. Future studies should employ independent interviewers. Third, interviews conducted immediately postintervention could not capture longer-term perspectives; follow-up interviews (e.g., 6–12 months) would assess sustained impacts [48]. Fourth, the supervised university setting may not reflect home-based or unsupervised feasibility; ecological validity requires testing in community settings without direct supervision. Finally, no patient/public involvement occurred in study design, which may have affected the relevance of the research questions and interview guide [49].

5 | Conclusion

This study provides valuable insights into the experiences and perceptions of community-dwelling adults with neurological disorders who participated in a RE program. The findings highlight the feasibility, safety and potential benefits of RE as an intervention for this population. Participants reported improvements in physical and psychological function and overall well-being, while also emphasising the enjoyment and motivation they derived from the exercise. These findings have important implications for rehabilitation professionals, healthcare providers and policymakers. They suggest that incorporating RE into community-based rehabilitation programs could offer a safe, enjoyable and effective option for adults with neurological disorders to promote their overall well-being. While further research is needed to quantify the long-term effects and optimal implementation strategies, this study provides a strong foundation for the development of RE interventions tailored to the needs of community-dwelling adults with neurological disorders.

Author Contributions

Adaora Justina Okemuo: conceptualisation, methodology, software, data curation, resources, formal analysis, project administration, visualisation, validation, writing–review and editing, writing–original draft, funding acquisition and investigation. Yetunde Marion Dairo: conceptualisation, methodology, formal analysis, supervision, resources,

funding acquisition and writing–review and editing. Dearbhla Gallagher: methodology, supervision and writing–review and editing.

Acknowledgements

The authors would like to express their gratitude to all the community-dwelling adults with neurological disorders who participated in this study, as well as to Parkinson's Disease UK for their invaluable assistance and support in recruiting participants.

Funding

This study was part of a PhD funded by Buckinghamshire New University, UK,

Ethics Statement

Ethical approval was sought and obtained from Buckinghamshire New University Research Ethics Committee (issue no: UEP, 2022Sep01) at the start of the study.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The study was registered in the OSF and can be viewed here (https://osf.io/cs6gb/?view_only=e6338ca155084c719e07182c65da376d).

References

1. The Neurological Alliance, "Neuro Patience: Still Waiting for Improvements in Treatment and Care," (2019), https://www.neural.org.uk/wp-content/uploads/2019/07/neuro-patience-2019-1.pdf.

2. WHO, "Brain Health," (2023), https://www.who.int/health-topics/brain-health#tab=tab_1.

3. E. Carmeli, "Physical Therapy for Neurological Conditions in Geriatric Populations," *Frontiers in Public Health* 5 (2017): 333, https://doi.org/10.3389/fpubh.2017.00333.

4. P. Catala, S. Lopez-Roig, C. Ecija, C. Suso-Ribera, and C. Peñacoba Puente, "Why Do Some People with Severe Chronic Pain Adhere to Walking Prescriptions Whilst Others Won'T? A cross-sectional Study Exploring Clinical and Psychosocial Predictors in Women with Fibromyalgia," *Rheumatology International* 41, no. 8 (2021): 1479–1484, https://doi.org/10.1007/s00296-020-04719-w.

5. F.-E. Kinnafick, C. Thøgersen-Ntoumani, S. O. Shepherd, O. J. Wilson, A. J. Wagenmakers, and C. S. Shaw, "It Together: a Qualitative Evaluation of Participant Experiences of a 10-Week, Group-Based, Workplace HIIT Program for Insufficiently Active Adults," *Journal of Sport & Exercise Psychology* 40, no. 1 (2018): 10–19, https://doi.org/10.1123/jsep.2017-0306.

6. D. Eager, S. Zhou, K. Ishac, I. Hossain, A. Richards, and L. N. Sharwood, "Investigation into the Trampoline Dynamic Characteristics and Analysis of Double Bounce Vibrations," *Sensors* 22, no. 8 (2022): 2916, https://doi.org/10.3390/s22082916.

7. F. Özdalyan, H. Gümüş, C. Gençoğlu, M. Tunar, C. Çetinkaya, and B. Muammer Kayatekin, "Comparison of the Biomechanical Parameters During Drop Jump on Compliant and Noncompliant Surfaces: a New Methodological Approach," *Turkish Journal of Sports Medicine* 57, no. 1 (2021): 15–20, https://doi.org/10.47447/tjsm.0553.

8. A. Bhattacharya, E. P. McCutcheon, E. Shvartz, and J. E. Greenleaf, "Body Acceleration Distribution and O2 Uptake in Humans During Running and Jumping," *Journal of Applied Physiology* 49, no. 5 (1980): 881–887, https://doi.org/10.1152/jappl.1980.49.5.881.

9. A. J. Okemuo, D. Gallagher, and Y. M. Dairo, "Effects of Rebound Exercises on Balance and Mobility of People with Neurological Disorders: a Systematic Review," *PLoS One* 18, no. 10 (2023): e0292312, https://doi.org/10.1371/journal.pone.0292312.

10. A. Okemuo, "Effect of Rebound Exercise on Overweight and Obese Adults: a Scoping Review," *Arch Phys Glob Res* (2021): https://doi.org/10.15442/apgr.25.1.1.

11. L. Cugusi, A. Manca, R. Serpe, et al., "Effects of a mini-trampoline Rebounding Exercise Program on Functional Parameters, Body Composition and Quality of Life in Overweight Women," *Journal of Sports Medicine and Physical Fitness* 58, no. 3 (2018): https://doi.org/10.23736/S0022-4707.16.06588-9.

12. C. Miklitsch, C. Krewer, S. Freivogel, and D. Steube, "Effects of a Predefined mini-trampoline Training Programme on Balance, Mobility and Activities of Daily Living After Stroke: a Randomized Controlled Pilot Study," *Clinical Rehabilitation* 27, no. 10 (2013): 939–947, https://doi.org/10.1177/0269215513485591.

13. J. Hahn, "The Effect of Modified Trampoline Training on Balance, Gait, and Falls Efficacy of Stroke Patients," *Journal of Physical Therapy Science* (2015).

14. A. Fricke, "Mini-Trampoline Jumping as an Exercise Intervention for Postmenopausal Women Who Experienced a Stroke: a Case Report," *Journal of Women's Health Physical Therapy* (2021).

15. P. Daneshvar, G. Ghasemi, V. Zolaktaf, and M. T. Karimi, "Comparison of the Effect of 8-week Rebound Therapy-based Exercise Program and weight-supported Exercises on the Range of Motion, Proprioception, and the Quality of Life in Patients with Parkinson's Disease," *International Journal of Preventive Medicine* 10, no. 1 (2019): https://doi.org/10.4103/ijpvm.IJPVM_527_18.

16. A. J. Okemuo, Y. M. Dairo, and D. Gallagher, "Feasibility of Using Rebound Exercise in Community-Dwelling Adults with Neurological Disorders," *Nursing and Health Sciences* 26, no. 4 (2024): e70004, https://doi.org/10.1111/nhs.70004.

17. A. Tong, P. Sainsbury, and J. Craig, "Consolidated Criteria for Reporting Qualitative Research (COREQ): a 32-item Checklist for Interviews and Focus Groups," *International Journal for Quality in Health Care* 19, no. 6 (2007): 349–357, https://doi.org/10.1093/intqhc/mzm042.

18. L. A. Palinkas, S. M. Horwitz, C. A. Green, J. P. Wisdom, N. Duan, and K. Hoagwood, "Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research," *Administration and Policy in Mental Health and Mental Health Services Research* 42, no. 5 (2015): 533–544, https://doi.org/10.1007/s10488-013-0528-y.

19. J. L. Smith, *Semi-Structured Interviewing and Qualitative Analysis* (1995).

20. M. N. Kaur, A. F. Klassen, F. Xie, et al., "An International Mixed Methods Study to Develop a New Preference-based Measure for Women with Breast Cancer: the BREAST-Q Utility Module," *BMC Women's Health* 21, no. 1 (2021): 8, https://doi.org/10.1186/s12905-020-01125-z.

21. F. C. Jassil, R. Richards, A. Carnemolla, et al., "Patients' Views and Experiences of Live Supervised tele-exercise Classes Following Bariatric Surgery During the COVID-19 Pandemic: the BARI-LIFESTYLE Qualitative Study," *Clinical Obesity* 12, no. 2 (2022): e12499, https://doi.org/10.1111/cob.12499.

22. K. Malterud, V. D. Siersma, and A. D. Guassora, "Sample Size in Qualitative Interview Studies: Guided by Information Power," *Qualitative Health Research* 26, no. 13 (2016): 1753–1760, https://doi.org/10.1177/1049732315617444.

23. M. Hennink and B. N. Kaiser, "Sample Sizes for Saturation in Qualitative Research: a Systematic Review of Empirical Tests," *Social Science & Medicine* 292 (2022): 114523, https://doi.org/10.1016/j.socscimed.2021.114523.

24. V. Braun and V. Clarke, "Reflecting on Reflexive Thematic Analysis," *Qualitative Research in Sport, Exercise and Health* 11, no. 4 (2019): 589–597, https://doi.org/10.1080/2159676X.2019.1628806.

25. A. Fricke, "Perceptions of a 12-week mini-trampoline Exercise Intervention for Postmenopausal Women," *The Journal of Sport and Exercise Science* (2023): https://doi.org/10.36905/jses.2023.01.07.

26. F. Rodrigues, D. S. Teixeira, H. P. Neiva, L. Cid, and D. Monteiro, "The Bright and Dark Sides of Motivation as Predictors of Enjoyment, Intention, and Exercise Persistence," *Scandinavian Journal of Medicine & Science in Sports* 30, no. 4 (2020): 787–800, https://doi.org/10.1111/sms.13617.

27. Y. M. Dairo, J. Collett, and H. Dawes, "Development of a single-item Physical Activity Intention Measure for Adults with Intellectual Disabilities: Evidence of Validity and Reliability," *Disability and Health Journal* 17, no. 4 (2024): 101670, https://doi.org/10.1016/j.dhjo.2024.101670.

28. D. S. Teixeira, F. Rodrigues, L. Cid, and D. Monteiro, "Enjoyment as a Predictor of Exercise Habit, Intention to Continue Exercising, and Exercise Frequency: the Intensity Traits Discrepancy Moderation Role," *Frontiers in Psychology* 13 (2022): 780059, https://doi.org/10.3389/fpsyg.2022.780059.

29. P. J. Teixeira, E. V. Carraça, D. Markland, M. N. Silva, and R. M. Ryan, "Exercise, Physical Activity, and self-determination Theory: a Systematic Review," *International Journal of Behavioral Nutrition and Physical Activity* 9, no. 1 (2012): 78, https://doi.org/10.1186/1479-5868-9-78.

30. J. Gavin, M. Keough, M. Abravanel, T. Moudrakovski, and M. Mcbrearty, "Motivations for Participation in Physical Activity Across the Lifespan," *International Journal of Wellbeing* 4, no. 1 (2014): 46–61, https://doi.org/10.5502/ijw.v4i1.3.

31. F. Zervou, N. A. Stavrou, S. Koehn, K. Zounhia, and M. Psychountaki, "Motives for Exercise Participation: the Role of Individual and Psychological Characteristics," *Cogent Psychology* 4, no. 1 (2017): 1345141, https://doi.org/10.1080/23311908.2017.1345141.

32. R. Sheridan, J. Martin-Kerry, J. Hudson, A. Parker, P. Bower, and P. Knapp, "Why do Patients Take Part in Research? an Overview of Systematic Reviews of Psychosocial Barriers and Facilitators," *Trials* 21, no. 1 (2020): 259, https://doi.org/10.1186/s13063-020-4197-3.

33. J. Stadelmaier, J. J. Meerpohl, and I. Toews, "Willingness to Participate In, Support or Carry out Scientific Studies for Benefit Assessment of Available Medical Interventions: a Stakeholder Survey," *PLoS One* 17, no. 8 (2022): e0271791, https://doi.org/10.1371/journal.pone.0271791.

34. A. Al-Nemr and A. N. Kora, "Effect of Core Stabilization Versus Rebound Therapy on Balance in Children with Cerebral Palsy," *Acta Neurologica Belgica* 124, no. 3 (2024): 843–851, https://doi.org/10.1007/s13760-023-02430-8.

35. E. Aboagye, J. Hagberg, I. Axén, et al., "Individual Preferences for Physical Exercise as Secondary Prevention for Non-specific Low Back Pain: a Discrete Choice Experiment," *PLoS One* 12, no. 12 (2017): e0187709, https://doi.org/10.1371/journal.pone.0187709.

36. I. V. Stødle, J. Debesay, Z. Pajalic, I. M. Lid, and A. Bergland, "The Experience of Motivation and Adherence to Group-based Exercise of Norwegians Aged 80 and More: a Qualitative Study," *Archives of Public Health* 77, no. 1 (2019): 26, https://doi.org/10.1186/s13690-019-0354-0.

37. M. Stevens, J. Lieschke, T. Cruwys, D. Cárdenas, M. J. Platow, and K. J. Reynolds, "Better Together: How Group-based Physical Activity Protects Against Depression," *Social Science & Medicine* 286 (2021): 114337, https://doi.org/10.1016/j.socscimed.2021.114337.

38. J. C. Clark, T. Baghurst, and B. S. Redus, "Self-Selected Motivational Music on the Performance and Perceived Exertion of Runners," *The Journal of Strength & Conditioning Research* 35, no. 6 (2021): 1656–1661, https://doi.org/10.1519/JSC.0000000000002984.

39. P. C. Terry, C. I. Karageorghis, M. L. Curran, O. V. Martin, and R. L. Parsons-Smith, "Supplemental Material for Effects of Music in Exercise and Sport: a Meta-Analytic Review," *Psychological Bulletin* 146, no. 2 (2020): 91–117, https://doi.org/10.1037/bul0000216.

40. E. S. Kerkelä, L. Jonsson, M. Lindwall, and J. Strand, "Individual Experiences Following a 6-month Exercise Intervention: a Qualitative Study," *International Journal of Qualitative Studies on Health and Well-Being* 10, no. 1 (2015): 26376, https://doi.org/10.3402/qhw.v10.26376.

41. T. Ellis, "Barriers to Exercise in People with Parkinson's disease," *Physical Therapy* (2013): https://pubmed.ncbi.nlm.nih.gov/23288910/.

42. M. R. Franco, A. Tong, K. Howard, et al., "Older People's Perspectives on Participation in Physical Activity: a Systematic Review and Thematic Synthesis of Qualitative Literature," *British Journal of Sports Medicine* 49, no. 19 (2015): 1268–1276, https://doi.org/10.1136/bjsports-2014-094015.

43. H. F. Mulligan, L. A. Hale, L. Whitehead, and G. D. Baxter, "Barriers to Physical Activity for People with Long-Term Neurological Conditions: a Review Study," *Adapted Physical Activity Quarterly* 29, no. 3 (2012): 243–265, https://doi.org/10.1123/apaq.29.3.243.

44. S. M. Pinto, M. A. Newman, and M. A. Hirsch, "Perceived Barriers to Exercise in Adults with Traumatic Brain Injury Vary by Age," *Journal of Functional Morphology and Kinesiology* 3, no. 3 (2018): 47, https://doi.org/10.3390/jfmk3030047.

45. L. Castelli, C. Iacovelli, A. M. Malizia, et al., "Assessment of Fall Risk in Neurological Disorders and Technology: Relationship Between Silver Index and Gait Analysis," *Sensors* 26, no. 3 (2026): 840, https://doi.org/10.3390/s26030840.

46. M. Q. Patton, *Qualitative Research & Evaluation Methods: Integrating Theory and Practice*, 4th ed. (Sage publications, 2015).

47. N. Bergen and R. Labonté, "'Everything Is Perfect, and We Have No Problems': Detecting and Limiting Social Desirability Bias in Qualitative Research," *Qualitative Health Research* 30, no. 5 (2020): 783–792, https://doi.org/10.1177/1049732319889354.

48. F. Skarin, E. Wästlund, and H. Gustafsson, "Maintaining or Losing Intervention-Induced Health-Related Behavior Change. A Mixed Methods Field Study," *Frontiers in Psychology* 12 (2021): 688192, https://doi.org/10.3389/fpsyg.2021.688192.

49. Involve, *Guidance on co-producing a Research Project* (National institute for health research, 2019), https://www.invo.org.uk/wp-content/uploads/2019/04/Copro_Guidance_Feb19.pdf.

Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Supporting Information.** Supporting File 1 contains the TIDieR checklist, providing a detailed breakdown of the rebound exercise intervention. The semistructured interview guide used in this study is provided in Supporting File 2.